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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/053,903	01/24/2002	Toshiaki Kanno	100120-00001	4102

7590 01/29/2004

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EXAMINER

MERCADO, JULIAN A

ART UNIT

PAPER NUMBER

1745

DATE MAILED: 01/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/053,903

Applicant(s)

KANNO ET AL.

Examiner

Julian Mercado

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2 and 5-22 is/are pending in the application.
- 4a) Of the above claim(s) 1, 2, 5, 6 and 10-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 7-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1, 2, 4-6 and 10-22, drawn to the product, classified in class 429, subclass 231.8.
- II. Claims 7-9, drawn to the process of making, classified in class 29, subclass 623.1.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product can be made by another and materially different process such as graphite electrode arc discharge.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with George Orem on January 13, 2004 a provisional election was made with traverse to prosecute the invention of Group II, claims 7-9. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1, 2, 4-6 and

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22 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 7-9 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 7 recites the limitation "non-vitreous" in line 9. This limitation was entered in a prior amendment to the parent application 08/462,747. This limitation was considered to be new matter in the parent application and is maintained herein. The examiner has reviewed the original specification in its entirety and has not found literal or descriptive support for such a feature.

In the event of an oversight by the examiner, applicant is requested to provide the relevant sections in the specification for clarification on this issue.

Claims 8 and 9 are rejected under 35 U.S.C. 112, first paragraph, as being dependent upon a rejected base claim.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsui et al. (U.S. Pat. 4,198,382) in view of Snyder et al. (WO 89/07163).

Regarding independent claim 7, Matsui et al. teaches intermixing a synthetic resin with carbon fibers, molding the mixture into a shaped and cured resinous composition then heating the intermediate product at a heating speed of 60°C./hour which is within the claimed heating speed of 1°C to 10°C/min. (col. 7 lines 10-17, col. 10 lines 36-45, col. 11 lines 29-46)

Matsui et al. does not explicitly teach vapor-phase grown carbon fibers. However, Snyder teaches an electrode material of a carbon-carbon composite vapor-phase grown within a carbon matrix. (col. 5 lines 17-28) The skilled artisan would find obvious to employ vapor-phase grown carbon fibers in Matsui et al.'s invention for reasons such as the graphite layers in vapor-phase grown carbon fibers being substantially parallel to the fibril axis, consistent with Matsui et al.'s desire for uniform graphitization of the formed carbon composite.

To the extent that applicant may be entitled to the claimed non-vitreous carbon for the reasons discussed under the 35 U.S.C. 112, first paragraph rejection (discussion above), the skilled artisan would find obvious that a carbon-carbon composite having vapor-phase grown fibers would be non-vitreous since a carbon material having a fibril matrix would naturally flow as a non-amorphous structure.

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Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsui et al. and Snyder et al. as applied to claim 7 above, and further in view of Witzke (EP 433507) and Berkebile et al. (U.S. Pat. 4,996,037).

The teachings of Matsui et al. and Snyder et al. are discussed above.

As to the graphitization temperature of 1000°C and 2000°C or above, the skilled artisan would have found obvious to employ the instant graphitization temperatures for reasons such as uniformly growing the carbon filamentary network. (see Witzke, col. 12 line 1 et seq.) As to temperatures higher than 2000°C prior to mixing with a synthetic resin, Berkebile is relied upon to show that carbon fiber graphitization prior to forming a composite occurs at temperatures as high as 3000°C. (col. 8 lines 16-40) Thus, the skilled artisan would have found obvious to employ a step prior to mixing with the synthetic resin in order to ensure stable and uniform fibril formation of the carbonized mixture.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (571) 272-1289. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

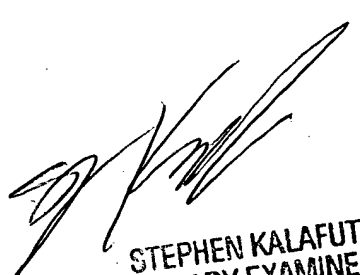
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


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STEPHEN KALAFUT
PRIMARY EXAMINER
GROUP

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